

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE April 1997		3. REPORT TYPE AND DATES COVERED
4. TITLE AND SUBTITLE Echoes 18, Radar Program				5. FUNDING NUMBERS
6. AUTHOR(S) Capt David Kohn				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) HQ AWS/XON 102 W. Losey St Rm 105 Scott AFB, IL 62225-5206				8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSORING/MONITORING AGENCY REPORT NUMBER
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION AVAILABILITY STATEMENT Approved for public release; distribution is unlimited				12b. DISTRIBUTION CODE
13. ABSTRACT (Maximum 200 words) The ability to interrogate a storm's structure is one of the most important aspects of severe weather analysis. The WSR-88D provides a means to do this by displaying different elevations of a particular storm. This Echoes will show you how to manually verify severe storms with the aid of WSR-88D User Functions (UFs) to display and manipulate products. This also provides a series of user functions you can use to interrogate storms at various distances from the Radar Data Acquisition (RDA) site.				
14. SUBJECT TERMS WSR-88D, NEXRAD, Training Program, Continuation Training				15. NUMBER OF PAGES 3
				16. PRICE CODE
17. SECURITY CLASSIFICATION OF REPORT Unclassified		18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified		19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified
				20. LIMITATION OF ABSTRACT UL

DTIC QUALITY INSPECTED 1

Standard Form 298 (Rev. 2-89) (EG)
Prescribed by ANSI Std. Z39.18
Designed using Perform Pro, WHS/DIOR, Oct 94

"Readiness through Knowledge"



Providing Service Worldwide

ECHOES

April 1997

Number 18

Radar Program

Headquarters Air Weather Service
Aerospace Sciences Division
102 W. Losey Street
Scott Air Force Base, Illinois 62225-5206



19970512 019

ECHOES

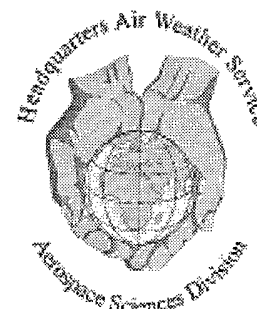
WSR-88D Information for Air Force Weather (AFW)

Number 18
April 1997

Contents of this issue of Echoes

Introduction	1
Implementation	2
Conclusion	3

"Readiness through Knowledge"



Providing Service Worldwide

HQ AWS/XON

102 W Losey St Rm 105
Scott AFB IL 62225-5206
DSN 576-4721, ext. 447

Theater

Tropical/Far East	ext. 250
Europe	ext. 511

CONUS

Southern	ext. 426
Western	ext. 418
Central	ext. 502
Eastern	ext. 221

XON Email Comment/Suggestion address
hqawsxon@hqaws.safb.af.mil

Published by Air Weather Service, Echoes are intended to provide WSR-88D information to Air Force Weather (AFW)

Approved for public release; distribution is unlimited

Radar Program

By
Capt David Kohn
Headquarters Air Weather Service, Aerospace Sciences Division
Scott AFB, Illinois



INTRODUCTION

This *ECHOES* will help you develop a WSR-88D radar program for your unit. We've found through our many visits, most units possess some form of radar program; however, many are not up to date. This program will focus on four main areas: responsibilities, training (including continuation training), the Radar Imagery Reference File (RIRF), and incorporating radar into your mission. This program is merely a shell to help your unit train and apply radar to station operations. It complements *FYI 34, Continuation Training*, and *FYI 35, Metsat Program*. Future modules and training guides will cover material needed to keep the unit's radar training program up to date.

"We've found through our many visits,
most units possess some form of
radar program; however, many are not
up to date."



IMPLEMENTATION

This program is designed to help the weather station technical leaders or the radar program manager bring the unit radar program up to speed. The Microsoft Word files electronically attached to this publication are available from the NEXRAD library on the AFW BBS. (If you cannot access the BBS, call your AWS/XON regional representative to receive a disk copy of the documents.) After receipt, print the main program, RADPROG.EXE, to review the contents. The document is arranged in numerical sections. You will need two binders: Set up the first binder by creating seven sections and loading the appropriate documents accordingly. The second binder has five sections and contains the radar initial training, continuation training, and RIRF.

Binder 1

Section 1.0 Responsibilities. Use the template provided (Section 1.0) and place the appointment memorandum in the binder. Have this person read their responsibilities (Section 1.1). This is a suggested list (compiled from AFMAN 15-125) and should reflect any additional radar responsibilities your unit may have.

Section 2.0 Points of Contact (POCs). This section should contain the numbers of the Operational Support Facility (OSF) Hot Line, HQ AWS/XON, the User Control Position (UCP), members of your Unit Radar Committee (URC), radar maintenance, and any other numbers you need to contact concerning the radar.

Section 3.0 PUP Operations. This section includes helps and quick references to items unique to your radar; items not necessarily found in the gray reference binders. Items to include would be:

- Routine Product Set (RPS) lists with a brief description of the list and its intended use.
- User Functions with a description of what it does, which RPS list that it is to be used with, and when to use it.
- Troubleshooting procedures.

- Archiving procedures, what and when.
- Shutdown procedures.
- Miscellaneous helps.

Section 4.0 UCP Operations (if applicable). This section includes hints and quick references to items unique to your radar; items not necessarily found in the gray reference binders. Items to include would be:

- Troubleshooting procedures.
- Archiving procedures, what and when.
- Shutdown procedures.
- Miscellaneous helps.

Section 5.0 Radar References and Publications.

There are many radar references available. Section 5.0 contains a list of references that may be useful to you. Remember, you probably have many of these references on your shelves. If you do not have them, you can request copies from the Air Weather Service Technical Library at DSN 576-2625.

Section 6.0. Contains *Tales From the Hot-Line* or where they can be located.

Section 7.0 Miscellaneous. This section contains miscellaneous items relating to the radar that is not training related.

Binder 2

Section 8.0 Radar Training Program Documentation. Review the training and continuation training plan. Weather station leaders, or appointed representatives, should brainstorm with the flight commander, NCOIC, and continuation training manager, to come up with a plan to accomplish radar training.

Section 9.0. This section includes separate initial checklists and certification tests for the Principal User Position (PUP) and UCP (if applicable) positions. The radar program manager should create a checklist that lists all knowledge areas and tasks in which an operator must be proficient for the position. The imagery interpretation checklist doubles as an initial

checklist and as a guide for your RIRF. We've included a certification test. You may want to add questions on signature identification. Cross reference imagery you have available at your unit to complete the test.

Section 10.0 Continuation Training (Reference: *FYI 34, Continuation Training*). This section focuses on refresher training to ensure personnel maintain skills and proficiency through a regimen of self study, follow-on training materials, and informal lectures or seminars.

Your plan should include radar training that corresponds with seasonal topics. Adapt the monthly training program located in Section 8.0 to meet your station's needs. Included are a few exercises and short quizzes to help build your program. The training should not overtax your unit but must be enough to maintain proficiency. Training should take 1 hour per month.

Periodically, continuation training packages will be available in the Air Force Weather Bulletin Board System NEXRAD Library and on the HQ AWS/XON Weather Radar Applications homepage at:

http://infosphere.safb.af.mil/users/aws/public_www/public/aws/hqaws/xon/xona/radar/xonradar.htm

As a minimum, develop a tracking method and store it in Section 8.0. More elaborate methods may include computer-based spreadsheets or forms. We recommend keeping it simple.

Section 11.0 The RIRF. The RIRF is a valuable supplement to your training program. Take the imagery interpretation checklist and cross-reference it to radar imagery in your weather station. Use the RIRF to document weather system patterns or weather signatures that affect your local base and cross-reference it to your TFRN.

Section 12.0 Miscellaneous. Section 12.0 is for miscellaneous correspondence.

Crossfeed

If you feel your unit's programs or documents are noteworthy, please e-mail them to us at hqawsxon@hqaws.safb.af.mil or mail them to us and we'll add them to the samples!



CONCLUSION

This program is only a shell, intended to help you update and arrange your unit radar program. If you need further help or guidance, please contact the HQ AWS/XON Weather Radar Applications team or your regional representative.

ECHOES

ECHOES # 1:	Basic WSR-88D Operating Procedures	Feb 93
ECHOES # 2:	WSR-88D Reflectivity and Related Products	Mar 93
ECHOES # 3:	Storm Structure User Functions	Jul 93
ECHOES # 4:	WSR-88D Dial-Up Capabilities	Jul 93
ECHOES # 5:	WSR-88D Velocity and Related Products	Sep 93
ECHOES # 7:	WSR-88D Severe Weather Analysis User Functions	Oct 93
ECHOES # 8:	Mesocyclone/Tornadic Vortex Signatures	Oct 93
ECHOES # 9:	Color Schemes on the Principal User Processor (PUP)	Oct 93
ECHOES #10:	Sea Breeze Fronts	Nov 93
ECHOES #11:	NEXnotes	Feb 94
ECHOES #12:	WSR-88D Unit Training Guide	Mar 94
ECHOES #14:	NEXnotes	Apr 94
ECHOES #15:	Clutter Suppression	Sep 95
ECHOES #16:	Operational Uses of VIL (Supersedes ECHOES #13)	Jan 96
ECHOES #17:	RPS Lists (Supersedes ECHOES #6)	Nov 96
ECHOES #18:	Radar Program	Apr 97

Superseded ECHOES are not listed.

Published by Air Weather Service, Echoes are
Intended to provide WSR-88D information to
Air Force Weather (AFW).

Approved for public release; distribution is unlimited